

### REMARKS/ARGUMENTS

Favorable reconsideration of this application, in light of the following discussion and amendment, is respectfully requested.

Claims 11-20 are presently active, and Claim 11 is amended by the present amendment. Support for changes to Claim 11 is found in the specification at least on page 30, lines 9-24, and Figures 7 and 12-15. Thus, no new matter is added.

By way of summary, the Official Action presents the following issues:

Claims 11, 15 and 18 are objected to as reciting informalities; Claims 11-17 and 20 under 35 U.S.C. § 102(b) as unpatentable over the publication “Automated Performance Modeling from Scenarios and SDL Designs of Distributed Systems” to El-Sayed et al. (hereinafter El-Sayed); and rejected Claims 18 and 19 under 35 U.S.C. § 103(a) as unpatentable over El-Sayed in view of U.S. Patent No. 6,324,496 to Alur et al. (hereinafter Alur).

Applicants thank the Examiner for the courtesy of the interview extended to the Applicants representative on February 5, 2008. During the interview, the outstanding rejections were discussed and the resource aspects of the El-Sayed reference were reviewed. However, no agreement was reached pending the Examiner’s further review and the response as filed. Comments presented during the interview are reiterated below.

### OBJECTION UNDER 35 U.S.C. §102

The Official Action has rejected Claims 11-17 and 20 under 35 U.S.C. §102 as being unpatentable over El-Sayed. The Official Action states that El-Sayed describes all of the Applicants claimed features. Applicants respectfully traverse the rejection.

Applicants amended Claim 11 recites, *inter alia*, the process for generating a performance model from a functional model for a system including a plurality of distributed hardware and software entities that engage to provide a service to at least one user, including:

formalizing the execution flows using a notation identifying causal relationships between different software entities of the system that are involved in the execution flows, the notation including resource consumption metrics, attributing specific resource consumption values in correspondence to a respective execution flow;

developing an intermediate model that comprises, in addition to the formalized execution flows, a resource specification quantifying resources available from physical hardware of the system, and an environment specification quantifying the amount of requests generated by said at least user; and

automating conversion of the developed intermediate model into a performance model. (emphasis added)

El-Sayed describes a performance model building process that takes an MSC model and generates a layer queuing network (LQN) performance model.<sup>1</sup> More specifically, El-Sayed describes taking an SDL specification including execution traces.<sup>2</sup> El-Sayed identifies messages from traces, different services provided by each process in the trace, and finds the precedence relationships between activities in each service.<sup>3</sup> More specifically, El-Sayed describes taking an SDL specification including execution traces.<sup>4</sup> Finally, El-Sayed maps the software architecture into an LQN model.<sup>5</sup>

Applicants submit that amended claim 1 recites a notation including resource consumption metrics attributing specific resource consumption values and correspondence to a respective execution flow. The consumption metrics are developed to reflect an environment specification quantifying the amount of requests generated by at least one user. In this way, a developed intermediate model may be automatically converted into a performance model such that the performance model includes notations identifying the resource consumption metrics in correspondence to a respective execution flow.

Claim 11 is distinguishable over El-Sayed as the applied reference fails to disclose or suggest providing the claimed notation to an intermediate model. El-Sayed merely describes using a message sequence chart (MCE) that illustrates different processes, messages passed

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<sup>1</sup> See El-Sayed at the Abstract.

<sup>2</sup> See El-Sayed at page 130.

<sup>3</sup> See El-Sayed, chapter 4.

<sup>4</sup> See El-Sayed at page 130.

<sup>5</sup> See El-Sayed at pages 132-133.

between the processes, and computational activities that each process executes.<sup>6</sup> El-Sayed fails to describe execution flows which already incorporate at this stage of the system resource consumption due to these flows.

Accordingly, Applicants submit that El-Sayed fails to disclose or suggest all the features of Claim 11. Thus, Applicants respectfully request that the rejection of Claim 11, and the claims depending therefrom, under 35 U.S.C. § 102(b) be withdrawn.

The outstanding Official Action rejected Claims 18 and 19 under 35 U.S.C. § 103(a) as unpatentable over El-Sayed in view of Alur. Applicants respectfully traverse the rejection.

As outlined above El-Sayed does not disclose all of the elements of amended Claim 11, which Claims 18 and 19 depend therefrom. As Alur does not remedy the deficiencies discussed above, Applicants respectfully submit that a *prima facie* case of obviousness has not been presented. Accordingly, Applicants respectfully request the rejection of Claims 18 and 19 under 35 U.S.C. § 103(a) be withdrawn.

Consequently, in view of the present amendment and response, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal allowance. A Notice of Allowance is earnestly solicited.

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<sup>6</sup> See El-Sayed at Figures 4-7.